

ATG GGT GGC CTA CAG ACT GCA CTC CTG GTT GTC CTC GTC CTC CTC GCT GTG GCG CTT CAA
 GCA ACT GAG GCA GGC CCC TAC GGC GCC AAC ATG GAA GAC AGC GTC TGC TGC CGT GAT TAC
 GTC CGT TAC CGT CTG CCC CTC CGC GTG GTG AAA CAC TTC TAC TGG ACC TCA GAC TCC TCC
 CCG AGG CCT GGC GTG GTG TTC CTG ACC TTC AGG GAT AAG GAG ATC TGT GGC GAT CCC AGA
 GTG CCC TGG GTG AAG ATG ATT CTC AAT AAG CTC AGC CAA TGA
 AGAGCCTACTCTGATGACCGTGGCCTTGGCTCTCCAGGAAGGCTCAGCAGCCCTACCTCCCTGCCATTATAGCTGCTC
 CCCGCCAGAAGCCTGTGCGAAGCTCTCTGCAATCCCTGATCTCCATCCCTGTGGCTGTACCCCTTGGTCACCTCCCTGCT
 GTCACTGCCATCTCCCCCTGACCCCTTTAACTCTCTCTCCCTCCCTCCCTGCACTCAGAGGCTCTCTTCCCATCA
 GCGATTCCCTTCTTAACCCCTTCCATGACTTCCACTGCCCTAAGCTCAGGTCACTCTCCCAAGCCTGCCATGTGGCC
 CTCGGATCTGGGTTCGATTTCTGTCTCCAGTCTGCCCACTTCCCTTCATGAATGTGGGTTCCTAGCTCCCTGTCTCC
 AAACCCATACTACACATCCCACTTCTGGGTCTTCCCTTGGATGTCTCTGACACTCAGAAAGTCCCCCTCCAGCCGCC

FIG. 1

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M  A  R  L  Q  T  A  L  L  V  V  L  V  L  L  A  V  A  L  Q
A  T  E  A  G  P  Y  G  A  N  M  E  D  S  V  C  C  R  D  Y
V  R  Y  R  L  P  L  R  V  V  K  H  P  Y  W  T  S  D  S  C
P  R  P  G  V  V  L  L  T  F  R  D  K  E  T  C  A  D  P  R
V  P  W  V  K  M  I  L  N  K  L  S  Q

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FIG. 2

1'GTGACCCACGGGTCCCGCCCGGAGAACCCGCAATCTTTGGGCCCCACAAAATACACCGACGATGCCCGATCTACTTTAAG 79
 GGCTGAAACCCACGGGCGCTGAGAGACTATAAGAGCGTTCCTACCGCC M E Q R G Q N 7
 A P A A S G A R K R H G P G P R E A R G 148
 GCC CCG GCC GCT TGG GGG GCC CCG AAA AGG CAC GGC CCA GGA CCC AGG GAG GCG CCG GGA 27
 A R P G L R V P K T L V L V V A A V L L 208
 GCC AGG CCT GGG CTC CCG GTC CCC AAG ACC CTT GTG CTC GTT GTC GGC GCG GTC CTG CTG 47
 L V S A E S A L I T Q Q D L A P Q Q R A 268
 TTG GTC TCA GCT GAG TCT GCT CTG ATC ACC CAA CAA GAC CTA GCT CCC CAG CAG AGA GCG 67
 A P Q Q K R S S P S E G L C P P G H H I 328
 GCC CCA CAA CAA AAG AGG TCC AGC CCC TCA GAG GGA TTG TGT CCA CCT GGA CAC CAT ATC 87
 S E D G R D C I S C K Y G Q D Y S T H W 388
 TCA GAA GAC GGT AGA GAT TGC ATC TCC TGC AAA TAT GGA CAG GAC TAT AGC ACT CAC TGG 107
 N D L L F C L R C T R C D S G E V E L S 448
 AAT GAC CTC CTT TTC TGC TTG CCG TGC ACC AGG TGT GAT TCA GGT GAA GTG GAG CTA AGT 127
 P C T T T R N T V C Q C E E G T F R E E 508
 CCC TGC ACC ACG ACC AGA AAC ACA GTG TGT CAG TGC GAA GAA GGC ACC TTC CCG GAA GAA 147
 D S P E M C R K C R T G C P R G M V K V 568
 GAT TCT CCT GAG ATG TGC CCG AAG TGC CCG ACA GGG TGT CCC AGA GGG ATG GTC AAG GTC 167
 G D C T P W S D I E C V H K E S G T K H 628
 GGT GAT TGT ACA CCC TGG AGT GAC ATC GAA TGT GTC CAC AAA GAA TCA GGT ACA AAG CAC 187
 S G E A P A V E E T V T S S P G T P A S 688
 AGT GGG GAA GCC CCA GCT GTG GAG GAG ACG GTG ACC TCC AGC CCA GGG ACT CCT CCC TCT 207
 P C S L S G I I I G V T V A A V V L I V 748
 CCC TGT TCT CTC TCA GGC ATC ATC ATA GGA GTC ACA GTT GCA GCC GTA GTC TTG ATT GTG 227
 A V F V C K S L L W K K V L P Y L K G I 808
 GCT GTG TTT GTT TGC AAG TCT TTA CTG TGG AAG AAA GTC CTT CCT TAC CTG AAA GGC ATC 247
 C S G G G G D P E R V D R S S Q R P G A 868
 TGC TCA GGT GGT GGT GGG GAC CCT GAG CGT GTG GAC AGA AGC TCA CAA CGA CCT GGG GCT 267
 E D N V L N E I V S I L Q P T Q V P E Q 928
 GAG GAC AAT GTC CTC AAT GAG ATC GTG AGT ATC TTG CAG CCC ACC CAG GTC CCT GAG CAG 287
 E M E V Q E P A E P T G V N M L S P G E 988
 GAA ATG GAA GTC CAG GAG CCA GCA GAG CCA ACA GGT GTC AAC ATG TTG TCC CCC GGG GAG 307
 S E H L L E P A E A E R S Q R R R L L V 1048
 TCA GAG CAT CTG CTG GAA CCG GCA GAA GCT GAA AAG TCT CAG AGG AGG AGG CTG CTG GTT 327
 P A N E G D P T E T L R Q C F D D F A D 1108
 CCA GCA AAT GAA GGT GAT CCC ACT GAG ACT CTG AGA CAG TGC TTC GAT GAC TTT GCA GAC 347
 L V P F D S W E P L M R K L G L M D N E 1168
 TTG GTG CCC TTT GAC TCC TGG GAG CCG CTC ATG AGG AAG TTG GGC CTC ATG GAC AAT GAG 367
 1228

FIG. 3 (1 of 3)

I K V A K A E A A G H R D T L Y T M L I	387
ATA AAG GTG GCT AAA GCT GAG GCA GCG GGC CAC AGG GAC ACC TTG TAC ACG ATG CTG ATA	1288
K W V N K T G R D A S V H T L L D A L E	407
AAG TGG GTC AAC AAA ACC GGG CGA GAT GCC TCT GTC CAC ACC CTG CTG GAT GCC TTG GAG	1348
T L G E R L A K Q K I E D H L L S S G K	427
ACG CTG GGA GAG AGA CTT GCC AAG CAG AAG ATT GAG GAC CAC TTG TTG AGC TCT GGA AAG	1408
F M Y L E G N A D S A M S *	441
TTC ATG TAT CTA GAA GGT AAT GCA GAC TCT GCC ATG TCC TAA	1450
GTGTGATTCTCTTCAGGAAGTGAGACCTTCCCTGGTTTACCTTTTTTCTGGAAAAAGCCCACTGGACTCCAGTCAGTA	1529
GGAAAGTGCCACAATTGTTCACATGACCGTACTCGAAGAACTCTCCCATCCAACATCACCCAGTGGATGGAACATCCT	1608
GTAACCTTTTCACTGCACCTTGGCATTTATTTTATAAGCTGAATGTGATAATAAGGACACTATGGAAATGTCTGGATCATT	1687
CCGTTTGTGCGTACTTTTGAGATTGGTTTGGGATGTCTTTTTCACAGCACTTTTTTATCCTAATGTAAATGCTTTA	1766
TTTATTTATTGGGCTACATTGTGAAGATCCATCTACACAGTCGTTGTTCGACTTCACCTTGATACTATATGATATGAACC	1845
TTTTTTGGGTGGGGGGTGCNGGGCAATTCACCTCTGTCTCCAGGCTGGAGTGCAATGGTGCAATCTTGGCTCACTATA	1924
GCCTTGACCTCTGAGGCTCAAGCGATTCTCTCAOCTCAGCCATCCAAATAGCTGGGACCAAGGTGTGCACCACCAAGC	2003
CCGGCTAATTTTTTGTATTTTGTCTAAATATAAGGGCTCTCTATGTTGCTCAGGGTGGTCTCGAATTCCTGGACTCAAG	2082
CAGTCTGCCACACTCAGACTCCCAAAGCGGTGGAATTAGARGCGTGAGCCCCCATGCTTGGCCTTAACCTTCTACTYTTT	2161
TATAATTCGTATGTTTATTTTATGAACATGAAGAACTTTAGTAAATGTACTTGTTTACATAGTTATGTGAATAGA	2240
TTAGATAAACATAAAAGGAGGAGACATACAATGGGGGAAGAAGAAGTCCCTGTAGAAAGTTNACGNTCTGGTTTC	2319
CAGCCTTCCCTCAGATGTACTTTGGCTTCAATGATTGGCAACTTCTACAGGGGCCAGTCTTTTGAACCTGGACAACCTTA	2398
CAAGTATATGAGTATTTATTTATAGGTAGTTGTTTACATATGAGTCGGGACCAAAGAGAACTGGATCCACGTGAAGTCCT	2477
GTGTGTGGCTGGTCCCTACCTGGGCAGTCTCATTTGCACCCATAGCCCCCATCTATGGACAGGCTGGGACAGAGGCAGA	2556
TGGGTAGATCACACATAACAAAGGGTCTATGTCTATATCCCAAGTGAACCTTGAGCCCTGTTTGGGCTCAGGAGATAGA	2635
AGACAAAATCTGTCTCCACGCTCTGCCATGGCATCAAGGGGAAGAGTAGATGGTGCTTGAGAAATGGTGTGAAATGGTT	2714
GCCATCTCAGGAGTAGATGGCCCGGCTCACTTCTGGTTATCTGTCTACCCCTGAGCCCATGAGCTGCCTTTTAGGGTACAG	2793
ATTGCCTACTTGAGGAOCTTGGCCGCTCTGTAAGCATCTGACTCATCTCAGAAATGTCAATTTCTTAACACTGTGGCAA	2872
CAGGACCTAGAATGGCTGACGCATTAAAGGTTTCTTCTGTGTCTCTGTTCTATTATGTTTAAAGACCTCAGTAACCAT	2951
TTACGCTCTTTCCAGCAAACCCCTTCTCCATAGTATTTTCAGTCATGGAAGGATCATTTATGCAGGTAGTCATTCCAGGA	3030
GTTTTGGTCTTTTCTGTCTCAAGGCATTGTGTGTTTTGTTCGGGACTGGTTTGGGTGGGACAAAGTTAGAATTGCCT	3109
GAAGATCACACATTGAGACTGTGTGTCTGTGGAGTTTTAGGAGTGGGGGTGACCTTTCTGGTCTTTGCACTTCCATC	3188
CTCTCCCACTTCCATCTGGCATCCCAAGCGTTGTCCCTGCACCTTCTGGAAGGCACAGGGTCTGCTGCCCTCCTGGTCT	3267

FIG. 3 (2 of 3)

TTGCCCTTGCTGGGCCTTCTGTGCAGGAAGCTCAGCCTCAGGGCTCAGAAGGTGCCAGTCCGGTCCCAGGTCCCTTGTC 3346
 CCTTCCACAGAGGCCTTCCTAGAAGATGCATCTAGAGTGTGAGCCTTATCAGTGTTTAAGATTTTCTTTTATTMTTAA 3425
 TTTTPTTGAGACAGAACTCTACTCTCTGCCCCAGGCTGGAGTGCACGGTAAGATCTTGGCTCAGTCCAACCTCCGCCCT 3504
 CCTGGGTTCAGOGATTTCTGTCCTCAGCCTCCGGAGTAGCTGGGATTGACAGGCACCGGCCACCAAGCCTGGTTAATT 3583
 TTGTATTMTTGTAGTAGAGACGGGGTTTACCATGTTGGTCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCTT 3662
 GGCCTCCGAAAGTGCTGGGATTACAGGGGTGAGCCACCAGCCAGGCCAAGCTATTCTMTTAAAGTAAGCTTCTGACGA 3741
 CATGAAATAATTGGGGGTTTGTGTGTAGTTACATTAGGCTTTGCTATATCCCCAGGCCAAATAGCATGTGACACAGG 3820
 ACAGCCATAGTATAGTGTGTCACTCGTGGTTGGTGTCTTTTCATGCTTCTGCCCTGTCAAAGGTCCCTATTTGAAATGT 3899
 GTTATAATACAAACAAGGAAGCACATTGTGTACAAAATACTTATGTATTATGAATCCATGACCAAATTAAATATGAAA 3978
 CCTTATATAAGGGSGGGCGGCCGC 4051

FIG. 3 (3 of 3)

GTGACCCACGGGTCCGGCCGGGAGAACCCGCAATCTTTGGGCCCCAATAATACACCGAGGATGCCCGATCTACTTTAAG 79
 GGCTCAAAACCCACGGGCGCTGAGAGACTATAAGAGCGGTTCCTACCGGC M E Q R G Q N 7
 ATG GAA CAA CCG GGA CAG AAC 148
 A P A A S G A R K R H G P G P R E A R G 27
 GGC CCG GGC GCT TCG GGG GCC CCG AAA AGG CAC GGC CCA GGA CCC AGG GAG GCG CCG GGA 208
 A R P G L R V P K T L V L V V A A V L L 47
 GGC AGG CCT GGG CTC CCG GTC CCC AAG ACC CTT GTG CTC GTT GTC GGC GCG GTC CTG CTG 268
 L V S A E S A L I T Q Q D L A P Q Q R A 67
 TTG GTC TCA GCT GAG TCT GCT CTG ATC ACC CAA CAA GAC CTA GCT CCC CAG CAG AGA GCG 328
 A P Q Q K R S S P S E G L C P P G H H I 87
 GGC CCA CAA CAA AAG AGG TCC AGC CCC TCA GAG GGA TTG TGT CCA CCT GGA CAC CAT ATC 388
 S E D G R D C I S C K Y G Q D Y S T H W 107
 TCA GAA GAC GGT AGA GAT TGC ATC TCC TGC AAA TAT GGA CAG GAC TAT AGC ACT CAC TGG 448
 N D L L F C L R C T R C D S G E V E L S 127
 AAT GAC CTC CTT TTC TGC TTG CCG TGC ACC AGG TGT GAT TCA GGT GAA GTG GAG CTA AGT 508
 P C T T T R N T V C Q C E E G T F R E E 147
 CCC TGC ACC ACG ACC AGA AAC ACA GTG TGT CAG TGC GAA GAA GGC ACC TTC CCG GAA GAA 568
 D S P E M C R K C R T G C P R G M V K V 167
 GAT TCT CCT GAG ATG TGC CCG AAG TGC CCG ACA GGG TGT CCC AGA GGG ATG GTC AAG GTC 628
 G D C T P W S D I E C V H K E S G I I I 187
 GGT GAT TGT ACA CCC TGG AGT GAC ATC GAA TGT GTC CAC AAA GAA TCA GGC ATC ATC ATA 688
 G V T V A A V V L I V A V F V C K S L L 207
 GGA GTC ACA GTT GCA GGC GTA GTC TTG ATT GTG GCT GTG TTT GTT TGC AAG TCT TTA CTG 748
 W K K V L P Y L K G I C S G G G G D P E 227
 TGG AAG AAA GTC CTT CCT TAC CTG AAA GGC ATC TGC TCA GGT GGT GGT GGG GAC CCT GAG 808
 R V D R S S Q R P G A E D N V L N E I V 247
 CGT GTG GAC AGA AGC TCA CAA CGA CCT GGG GCT GAG GAC AAT GTC CTC AAT GAG ATC GTC 868
 S I L Q P T Q V P E Q E M E V Q E P A E 267
 AGT ATC TTG CAG CCC ACC CAG GTC CCT GAG CAG GAA ATG GAA GTC CAG GAG CCA GCA GAG 928
 P T G V N M L S P G E S E H L L E P A E 287
 CCA ACA GGT GTC AAC ATG TTG TCC CCC GGG GAG TCA GAG CAT CTG CTG GAA CCG GCA GAA 988
 A E R S Q R R R L L V P A N E G D P T E 307
 GCT GAA AGG TCT CAG AGG AGG AGG CTG CTG GTT CCA GCA AAT GAA GGT GAT CCC ACT GAG 1048
 T L R Q C F D D F A D L V P F D S W E P 327
 ACT CTG AGA CAG TGC TTC GAT GAC TTT GCA GAC TTG GTG CCC TTT GAC TCC TGG GAG CCG 1108
 L M R K L G L M D N E I K V A K A E A A 347
 CTC ATG AGG AAG TTG GGC CTC ATG GAC AAT GAG ATA AAG GTG GCT AAA GCT GAG CCA GCG 1168
 G H R D T L Y T M L I K W V N K T G R D 367
 GGC CAC AGG GAC ACC TTG TAC ACG ATG CTG ATA AAG TGG GTC AAC AAA ACC CCG GGA GAT 1228

FIG. 4 (1 of 3).

A S V H T L L D A L E T L G E R L A K Q 387
 GCC TCT GTC CAC ACC CTG CTG GAT GGC TTG GAG ACG CTG GGA GAG AGA CTT GCC AAG CAG 1288
 K I E D H L L S S G K F M Y L E G N A D 407
 AAG ATT GAG GAC CAC TTG TTG AGC TCT GGA AAG TTC ATG TAT CTA GAA GGT AAT GCA GAC 1348
 S A M S *
 TCT GCC ATG TCC TAA 412
 1363
 GTGTGATTCTCTTCAGGAAGTGAGACCTTCCCTGGTTTACCTTTTTTCTGGAAAAAGCCCACTGGACTCCAGTCAGTA 1442
 GGAAAGTGCCACAATTGTGCATGACCGTACTGGAAGAACTCTCCCATCCAACATCAGCCAGTGGATGGAACATCCT 1521
 GTAACCTTTTCACTGCACTTGGCATTATTTTTATAAGCTGAATGTGATTAATAAGGACACTATGAAAATGTCTGGATCATT 1600
 CCGTTTGTGGTACTTTGAGATTGGTTTGGGATGTCTATTGTTTTCACAGCACTTTTTTATCCTAATGTAAATGCTTTA 1679
 TTTATTTATTTGGGCTACATTGTAGATCCATCTACACAGTGGTGTGCGACTTCACTTGATATAATGATATGAACC 1758
 TTTTTTGGGTGGGGGGTGCNGGGCAATTCCACTCTGTCTCCAGGCTGGAGTGCAATGGTGCAATCTTGGCTCACTATA 1837
 GCGTTGACCTCTGAGGCTCAAGCGATTCTCTACCTCAGCCATCCAAATAGCTGGGACCACAGGTGTGCACCACCACGC 1916
 CCGGCTAATTTTTTGTATTTTGTCTAAATATAAGGGCTCTCTATGTTGCTCAGGGTGGTCTGGAATTCCTGGACTCAAG 1995
 CAGTCTGCCCACYTCAGACTCCCAAGCGGTGGAATTAGARGCGTGAGCCCCCATGCTTGGGCTTACCTTTCTACTYTTT 2074
 TATAATCTGTATGTTATTATTTATGAACATGAAGAACTTTAGTAAATGTACTTGTTTACATAGTTATGTGAATAGA 2153
 TTAGATAAACATAAAAAGGAGGAGACATACAATGGGGGAAGAAGAAGTCCCTGTGAAGAAGTTNACGNTCTGGTTTC 2232
 CAGCCTTCCCTCAGATGTACTTTGGCTTCAATGATTGGCAACTTCTACAGGGGCCAGTCTTTTGAAGTGGACAACTTGA 2311
 CAAGTATATGAGTATTATTTATAGGTAGTTGTTACATATGAGTGGGACCAAAGAGAACTGGATCCACGTGAAGTCTCT 2390
 GTGTGTGGCTGGTCCCTACCTGGGCAGTCTCATTTGCAOCCATAGCCCCCATCTATGGACAGGCTGGGACAGAGGCAGA 2469
 TGGTTAGATCACACATAACAATAGGGTCTATGTCTATCCCAAGTGAACCTTGAGCCCTGTTTGGGCTCAGGAGATAGA 2548
 AGACAAAATCTGTCTCCACGTCTGCCATGGCATCAAGGGGAAGAGTAGATGGTGCTTGAGAATGGTGTGAAAATGGTT 2627
 GCCATCTCAGGAGTAGATGGCCCGGCTCACTTCTGGTTATCTGTACCCCTGAGCCCATGAGCTGCCTTTTAGGGTACAG 2706
 ATTCCTACTTGAAGACCTTGGGCGCTCTGTAAAGCATCTGACTCATCTCAGAAAATGTCAATCTTTAAACACTGTGGCAA 2785
 CAGGACCTAGAATGGCTGACGCATTAAGGTTTTCTCTGTGTCTCTGTTCTATTATTGTTTAAAGACCTCAGTAACCAT 2864
 TTCAGCTCTTTCCAGCAACCCCTTCTCCATAGTATTTTCACTCATGGAAGGATCATTTATGCAAGGTAGTCATTCCAGGA 2943
 GTTTTGGTCTTTTCTGTCTCAAGGCATTGTGTGTTTGTTCGGGACTGGTTTGGGTGGGACAAAGTTAGAATTGCCT 3022
 GAAGATCACACATTCACTGTGTGTCTGTGGAGTTTATAGAGTGGGGGTGACCTTTCTGGTCTTTGCACTTCCATC 3101
 CTCTCCCACTTCCATCTGGCATCCCAAGGTTGTCCCTGCACTTCTGGAAGGCACAGGGTCTGCTGCCTCCTGGTCT 3180
 TTGCCTTTGCTGGGCTTCTGTGCAAGGACGCTCAGCCTCAGGGCTCAGAAGGTGCCAGTCCGGTCCAGGTCCCTTGTCT 3259

FIG. 4 (2 of 3)

CCTTCCACAGAGGCTTCCTAGAAGATGCATCTAGAGTGTGAGCCTTATCAGTGTTTAAGATTTTCTTTTATTTTAA 3338
 TTTTTTTGAGACAGAACTCTACTCTCTGCCCCAGGCTGGAGTGCAAGGTACGATCTTGGCTCAGTGCAACCTCCGCCT 3417
 OCTGGGTTCAGGGATTCCTGTCCTCAGCCTCCGGAGTAGCTGGGATTGCAGGCCACCGGCCACCAAGCCTGGTTAATT 3496
 TTTGTATTTTTAGTAGAGAGGGGTTCACCATGTTGGTCAGGCTGGTCTCGAACTCCTGAACCTCAGGTGATCCACCTT 3575
 GGCCTCCGAAAGTGCTGGGATTACAGGGGTGAGCCACCAGCCAGGCCAAGCTATTCTTTTAAAGTAAGCTTCTTGACGA 3654
 CATGAAATAATTGGGGGTTTTGTTGTTAGTTACATTAGGCTTTGCTATATCCCCAGGCCAAATAGCATGTGACACAGG 3733
 ACAGCCATAGTATAGTGTGTCACCTCGTGGTGGTGTCTTTTCATGCTTCTGCCCCTGTCAAAGGTCCCTATTTGAAATGT 3812
 GTTATAATACAAACAAGGAAGCACATTGTGTACAAAACTTATGTATTTATGAATCCATGACCAAATTAAATATGAAA 3891
 CCTTATATAAAGGSGGGGGCGCGC 3964

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FIG. 5 (1 of 2)

AAGATTTTCAGGGTGTACCTATGAAATTGCTTTAAATGCACTGCTGGTGTAAATAATTAGCAAGCAAAAGCGTTTCTGT 1643
 GACTTCAGGTACCAGCTTAAAGAGCACTAGGGATGGGGAACGAATGCCAAATCAGACTCCACCTAGAGCACCAGGAAAC 1722
 AGCTGTACCTGGTAGGGAAATGGTGTGCTGAAAGGGGAGGCTGAGCCAGTGGGAGACTGAACTTGTGCAGCCTTAG 1801
 CCAAGACAAAGCAGTGTTTTCAGCAGACGGCTGATGGGACAGGAATTGAAGAAGAGAATTGACTCGTATGAACAGGAC 1880
 AGGGTGAAAATGCTGGGAATTATAATGGGAAACAAAACATCTATGTTTCATATTTTGTAAATATTCATTGTTAAGTTT 1959
 ATATCTGGATATAATGTTCTTTTAAACAAGTATAATCATATCGTCGGAGGTTAAGATTATGAAATTTTAGAATCTCTA 2038
 TTCAAGATGATGTTCACTCCAAATACACTACAGAATTTAGTCAACATTTTATATAATGTTTCAATAAATGTTTCTTTCA 2117
 ATAAAAAAAAAAAAAAAAA 2135

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M	P	S	L	P	A	P	P	A	P	L	L	L	L	G	L	L	L	L	G	20
ATG	CCG	AGC	CTC	CCG	GCC	CCG	CCG	GCC	CCG	CTG	CTG	CTC	CTC	GGG	CTG	CTG	CTG	CTC	GGC	60
S	R	P	A	R	G	A	G	P	E	P	P	V	L	P	I	R	S	E	K	40
TCC	CCG	CCG	GCC	CGC	GGC	GCC	GGC	CCA	GAG	CCC	CCC	GTG	CTG	CCC	ATC	CGT	TCT	GAG	AAG	120
E	P	L	P	V	R	G	A	A	G	C	T	F	G	G	K	V	Y	A	L	60
GAG	CCG	CTG	CCC	GTT	CCG	GGA	GCG	GCA	GGC	TGC	ACC	TTC	GGC	GGG	AAG	GTC	TAT	GCC	TTG	180
D	E	T	W	H	P	D	L	G	E	P	F	G	V	M	R	C	V	L	C	80
GAC	GAG	ACG	TGG	CAC	CCG	GAC	CTA	GGG	GAG	CCA	TTC	GGG	GTG	ATG	CGC	TGC	GTG	CTG	TGC	240
A	C	E	A	P	Q	W	G	R	R	T	R	G	P	G	R	V	S	C	K	100
GCC	TGC	GAG	GCG	CCT	CAG	TGG	GGT	CGC	CGT	ACC	AGG	GGC	CCT	GGC	AGG	GTC	AGC	TGC	AAG	300
N	I	K	P	E	C	P	T	P	A	C	G	Q	P	R	Q	L	P	G	H	120
AAC	ATC	AAA	CCA	GAG	TGC	CCA	ACC	CCG	GCC	TGT	GGG	CAG	CCG	CGC	CAG	CTG	CCG	GGA	CAC	360
C	C	Q	T	C	P	Q	E	R	S	S	S	E	R	Q	P	S	G	L	S	140
TOC	TGC	CAG	ACC	TGC	CCC	CAG	GAG	CGC	AGC	AGT	TCG	GAG	CGG	CAG	CCG	AGC	GGC	CTG	TCC	420
F	E	Y	P	R	D	P	E	H	R	S	Y	S	D	R	G	E	P	G	A	160
TTC	GAG	TAT	CCG	CCG	GAC	CCG	GAG	CAT	CGC	AGT	TAT	AGC	GAC	CGC	GGG	GAG	CCA	GGC	GCT	480
E	E	R	A	R	G	D	G	H	T	D	F	V	A	L	L	T	G	P	R	180
GAG	GAG	CCG	GCC	CGT	GGT	GAC	GGC	CAC	ACG	GAC	TTC	GTG	GCG	CTG	CTG	ACA	GGG	CCG	AGG	540
S	Q	A	V	A	R	A	R	V	S	L	L	R	S	S	L	R	F	S	I	200
TGG	CAG	GCG	GTG	GCA	CGA	GCC	CGA	GTC	TCG	CTG	CTG	CGC	TCT	AGC	CTC	CGC	TTC	TCT	ATC	600
S	Y	R	R	L	D	R	P	T	R	I	R	F	S	D	S	N	G	S	V	220
TCC	TAC	AGG	CCG	CTG	GAC	CGC	CCT	ACC	AGG	ATC	CGC	TTC	TCA	GAC	TCC	AAT	GGC	AGT	GTC	660
L	F	E	H	P	A	A	P	T	Q	D	G	L	V	C	G	V	W	R	A	240
CTG	TTT	GAG	CAC	CCT	GCA	GCC	CCC	ACC	CAA	GAT	GGC	CTG	GTG	TGT	GGG	GTG	TGG	CGG	GCA	720
V	P	R	L	S	L	R	L	L	R	A	E	Q	L	H	V	A	L	V	T	260
GTG	CCT	CCG	TTG	TCT	CTG	CCG	CTC	CTT	AGG	GCA	GAA	CAG	CTG	CAT	GTG	GCA	CTT	GTG	ACA	780
L	T	H	P	S	G	E	V	W	G	P	L	I	R	H	R	A	L	A	A	280
CTC	ACT	CAC	CCT	TCA	GGG	GAG	GTC	TGG	GGG	CCT	CTC	ATC	CGG	CAC	CGG	GCC	CTG	GCT	GCA	840
E	T	F	S	A	I	L	T	L	E	G	P	P	Q	Q	G	V	G	G	I	300
GAG	ACC	TTC	AGT	GCC	ATC	CTG	ACT	CTA	GAA	GGC	CCC	CCA	CAG	CAG	GGC	GTA	GGG	GGC	ATC	900
T	L	L	T	L	S	D	T	E	D	S	L	H	F	L	L	L	F	R	G	320
ACC	CTG	CTC	ACT	CTC	AGT	GAC	ACA	GAG	GAC	TCC	TTG	CAT	TTT	TTG	CTG	CTC	TTC	CGA	GGG	960
L	L	E	P	R	S	G	G	L	T	Q	V	P	L	R	L	Q	I	L	H	340
CTG	CTG	GAA	CCC	AGG	AGT	GGG	GGA	CTA	ACC	CAG	GTT	CCC	TTG	AGG	CTC	CAG	ATT	CTA	CAC	1020
Q	G	Q	L	L	R	E	L	Q	A	N	V	S	A	Q	E	P	G	F	A	360
CAG	GGG	CAG	CTA	CTG	CGA	GAA	CTT	CAG	GCC	AAT	GTC	TCA	GCC	CAG	GAA	CCA	GGC	TTT	GCT	1080
E	V	L	P	N	L	T	V	Q	E	M	D	W	L	V	L	G	E	L	Q	380
GAG	GTG	CTG	CCC	AAC	CTG	ACA	GTC	CAG	GAG	ATG	GAC	TGG	CTG	GTG	CTG	GGG	GAG	CTG	CAG	1140

FIG. 6 (1 of 3)

M A L E W A G R P G L R I S G H I A A R 400
ATG GCC CTG GAG TGG GCA GGC AGG CCA GGG CTG CGC ATC AGT GGA CAC ATT GCT GCC AGG 1200
K S C D V L Q S V L C G A D A L I P V Q 420
AAG AGC TGC GAC GTC CTG CAA AGT GTC CTT TGT GGG GCT GAT GCC CTG ATC CCA GTC CAG 1260
T G A A G S A S L T L L G N G S L I Y Q 440
ACG GGT GCT GCC GGC TCA GCC AGC CTC ACG CTG CTA GGA AAT GGC TCC CTG ATC TAT CAG 1320
V Q V V G T S S E V V A M T L E T K P Q 460
GTG CAA GTG GTA GGG ACA AGC AGT GAG GTG GTG GCC ATG ACA CTG GAG ACC AAG CCT CAG 1380
R R D Q R T V L C H M A G L Q P G G H T 480
CGG AGG GAT CAG CGC ACT GTC CTG TCC CAC ATG GCT GGA CTC CAG CCA GGA GGA CAC ACG 1440
A V G I C P G L G A R G A H M L L Q N E 500
GCC GTG GGT ATC TGC CCT GGG CTG GGT GCC CGA GGG GCT CAT ATG CTG CTG CAG AAT GAG 1500
L F L N V G T K D F P D G E L R G H V A 520
CTC TTC CTG AAC GTG GGC ACC AAG GAC TTC CCA GAC CGA GAG CTT CGG GGG CAC GTG GCT 1560
A L P Y C G H S A R H D T L S V P L A G 540
GCC CTG CCC TAC TGT GGG CAT AGC GCC CGC CAT GAC ACG CTG TCC GTG CCC CTA GCA GGA 1620
A L V L P P V K S Q A A G H A W L S L D 560
GCC CTG GTG CTA CCC CCT GTG AAG AGC CAA GCA GCA GGG CAC GCC TGG CTT TCC TTG GAT 1680
T H C H L H Y E V L L A G L G G S E Q G 580
ACC CAC TGT CAC CTG CAC TAT GAA GTG CTG CTG GCT GGG CTT GGT GGC TCA GAA CAA GGC 1740
T V T A H L L G P P G T P G P R R L L K 600
ACT GTC ACT GCC CAC CTC CTT GGG CCT CCT GGA ACG CCA GGG CCT CGG CGG CTG CTG AAG 1800
G F Y G S E A Q G V V K D L E P E L L R 620
GGA TTC TAT GGC TCA GAG GCC CAG GGT GTG GTG AAG GAC CTG GAG CCG GAA CTG CTG CGG 1860
H L A K G M A S L M I T T K G S P R G E 640
CAC CTG GCA AAA GGC ATG GCC TCC CTG ATG ATC ACC ACC AAG GGT AGC CCC AGA GGG GAG 1920
L R G Q R R T V I C D P V V C P P P S C 660
CTC CGA GGG CAG AGA CGA ACG GTG ATC TGT GAC CCG GTG GTG TGC CCA CCG CCC AGC TGC 1980
P H P V Q A P D Q C C P V C P E K Q D V 680
CCA CAC CCG GTG CAG GCT CCC GAC CAG TGC TGC CCT GTT TGC CCT GAG AAA CAA GAT GTC 2040
R D L P G L P R S R D P G E G C Y F D G 700
AGA GAC TTG CCA GGG CTG CCA AGG AGC CCG GAC CCA GGA GAG GGC TGC TAT TTT GAT GGT 2100
D R S W R A A G T R W H P V V P P F G L 720
GAC CGG AGC TGG CGG GCA CGG GGT ACG CGG TGG CAC CCC GTT GTG CCC CCC TTT GGC TTA 2160
I K C A V C T C K G G T G E V H C E K V 740
ATT AAG TGT GCT GTC TGC ACC TGC AAG GGG GGC ACT GGA GAG GTG CAC TGT GAG AAG GTG 2220
Q C P R L A C A Q P V R V N P T D C C K 760
CAG TGT CCC CGG CTG GCC TGT GCC CAG CCT GTG CCT GTC AAC CCC ACC GAC TGC TGC AAA 2280

FIG. 6 (2 of 3)

Q C P V G S G A H P Q L G D P M Q A D G	780
CAG TGT CCA GTG GGG TCG GGG GCC CAC CCC CAG CTG GGG GAC CCC ATG CAG GCT GAT GGG	2340
P R G C R F A G Q W F P E S Q S W H P S	800
CCC CGG GGC TGC CGT TTT GCT GGG CAG TGG TTC CCA GAG AGT CAG AGC TGG CAC CCC TCA	2400
V P P F G E M S C I T C R C G A G V P H	320
GTG CCC CCT TTT GGA GAG ATG AGC TGT ATC ACC TGC AGA TGT GGG GCA GGG GTG CCT CAC	2460
C E R D D C S L P L S C G S G K E S R C	340
TGT GAG CGG GAT GAC TGT TCA CTG CCA CTG TCC TGT GGC TCG GGG AAG GAG AGT CGA TGC	2520
C S R C T A H R R P A P E T R T D P E L	860
TGT TCC CGC TGC ACG GCC CAC CGG CGG CCA GCC CCA GAG ACC AGA ACT GAT CCA GAG CTG	2580
E K E A E G S *	868
GAG AAA GAA GCC GAA GGC TCT TAG	2604
GGAGCAGCCAGAGGGCCCAAGTGACCAAGAGGATGGGGCCTGAGCTGGGAAGGGGTGGCATCGAGGACCTTCTTGCATT	2683
CTCCTGTGGGAAGCCCAAGTGCCTTTGCTCCTCTGTCTGCTCTACTCCACCCCACTACCTTTGGGAACCACAGCTC	2762
CACAAGGGGGAGAGGCAGCTGGGCCAGACCGAGGTCAAGCCCACTCCAAGTCTGCTGCCCTGCCACCTCGGCCTCTGTCC	2841
TTGGAAGCCCCACCCCTTTCTCCTGTACATAATGTCACTGGCTTGTGGGATTTTAAATTTATCTTCACTCAGCACCA	2920
AGGGCCCCCGACACTCCACTCCTGCTGCCCCCTGAGCTGAGCAGAGTCATTATTGGAGAGTTTGTATTTATTAAACAT	2999
TTCTTTTTCAGTCAAAAAAAAAAAAAAGGGCGGCCGC	3037

FIG. 6 (3 of 3)

APAPLLLLLGLLLLGSRPARGAGPEPPVLPPIRSEKEPLPVRGAAGCTFGG 60
 ..|: ||::|::: | :::.....|||..|..|.. :.:|||
 QCPPILLVWTLWIM....AVDCSRPKVFLPIQPEQEPLQSKTPAGCTFGG 47
 .
 KVYALDETWHPD LGEPFGVMRCVLCACEAPQWGRRTRGPRVSCKNIKPE 110
 |..|:..| | | | | | | | | | : | | | | | | | | | | : | | | | | | | | :
 KFYSLEDSWHPDLGEPFGVMHCVLCYCE.PQRSRRGKPSGKVSCKNIKHD 96
 .
 CTPACGQPRQLPGHCCQTCPOERSSSSERQPSGL..SFEYPRDPEHRSYS 158
 ||..|:..| | | | | | | | | | : | | | | | | | | : | | | | | | | | :
 CPSPSCANPILLPLHCCKTCPKAPPPPIKKSDFVFDGFEYFQEKDDDDLYN 146
 .
 DRGEPGAEERARGDGHTDFVALLTGPR.....SQAVARARVSLLRSSLR 202
 ||: :::: | ::::~::~|||~::~|.. : ||:~::~|..| | | |
 DRSYLSSDDVAVEESRSEYVALLTAPSHVWPPVTSGVAKARFNLQRSNLL 196
 .
 FSISYRRLDRPTRIRFSDSNGSVLFEHPA...APTQDGLVCGVWRAVPRL 249
 | | | | :::| | | | | | | | | | : | | | | | | | | : | | | | | | | | :
 FSITYKWIDRLSRIRFSDLDGSVLFEHPVHRMGSPRDDTICGIWRS LNRS 246
 .
 SLRLLRAEQLHVALVTLTHPSGEVWGPLIRHRALAAETFSAILTLEGPPQ 299
 | | | | ::: | | | | | | | | | | : | | | | | | | | : | | | | | | | | :
 TLRLLRMGHILVSLVTTTLSEPEISGKIVKHKALFSESFSALLTPEDSDE 296
 .
 QGVGGITLLTSLDTEDSLHFLLLFRGLLEPRSGGLTQVPLRLQILHQGQL 349
 | | | | :::| | | | | | | | | | : | | | | | | | | : | | | | | | | | :
 TGGGGLAMLTLSDVDDNLHFI MLRLRGLSGEED...QIPILVQISHQNHV 343
 .
 LRELQANVSAQEPGFAEVLPNLTVQEMDWLVLGELQMALEWAGRPG LRIS 399
 : | | | | | | | | | | : | | | | | | | | : | | | | | | | | : | | | | | | | | :
 IRELYANISAEQDFAEVLPDLSSREMLWLAQGQLEISVQTEGRRPQSMS 393
 .
 GHIAARKSCDVLQSVLCGADALIPVQTGAAGSASLTLLGNGSLIYQVQVV 449
 | | | | | | | | | | : | | | | | | | | : | | | | | | | | : | | | | | | | | :
 GIITVRKSCDTLQSVLSGGDALNPTKTGAVGSASITLHENG TLEYQIQIA 443

GTSSEVVAMTLETKPQRRDQRTVLCHMAGLQPGGHTAVGICPGLGARGAH 499
 |||.||:|||||.||:..||:|.||. :.||:|
 GTMSTVTAVTLETKPRRKTKRNILHDMSKDYHDGR.VWGYWIDANARDLH 492
 MLLQNELFLNVGTKDFPDGELRGHVAALPYCGHSARHDTLSVPLAGALVL 549
 |||||.|||||:|||||.||:|||||:..:| |:|||.||:..|.|||||.||:|
 MLLQSEFLNVATKDFQEGELRGQITPLLYSGLWARYEKLVPVPLAGQFVS 542
 PPVKSQAAGHAWLSLDTHCHLHYEVLLVGLGGSEQGTVTAHLLG..... 593
 ||:..|||:|||||.|||||:..:| |:|||.||:..||| |
 PPIRTGSAGHAWVSLDEHCHLHYQIVVTGLGKAEDAALNAHLHGFAELGE 592
 PPGTPGPRRLKGFYGSEAQGVVKDLEPELLRHLAKGMASLMITTKGSP 642
 ..:| |:||||| |||||: ||| ||:| | : :.|||. |
 VGESSPGHKRLLKGFYGSEAQGSVKDLDLELLGHL SRGTAFIQVSTKLNP 642
 RGELRG..... 648
 ||:|
 RGEIRGQIHIPNSCESGGVSLTPEEPEY EYEIYEEGRQRPDDL RKDPRA 692
QRRTVICDPVVCPPPSCPHPVQA 671
 |:|||||:|||||.||:|:
 GSFEGQLRAHGSRWAPDYDRKCSVCSCQKRTVICDPVCPPLNCSQPVHL 742
 PDQCCPVCPEKQDVRDL PGLPRSRDPGEGCYFDGDRSWRAAGTRWHPVVP 721
 |||||.||:|:|.||. :||:|||||:||||| ||
 PDQCCPVCEEKEMREVKKPERAR.TSEGCFDGD RSWKAAGTRWHPFVP 791
 PFGLIKCAVCTCKGGTGEVHCEKVQCPRLACAQPVRVNPTDCCKQCPVGS 771
 |||||:|||||:||||| ||:|.||:|.|||.|||||:..
 PFGLIKCAICTCKGSTGEVHCEKVTCPKLSCTNPIRANPSDCCKQCPVEE 841
 GAHPQLGDPMQADGPRGCRFAGQWFPESQSWHPSVPPFGEMSCITCRGA 821
 .. :|:|.|||.||: :|||: :|:|: :.|||||.|||||.||:| |:
 RSPMELADSMQSDGAGSCRFRHWYPNHERWHPTVPPFGEMKCVTCTCAE 891

